

# Notice of Allowability

Application No.

09/894,160

Applicant(s)

METCALFE ET AL.

Examiner

James A. Thompson

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 05 July 2007.
2. ☒ The allowed claim(s) is/are 25-43.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).


\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_



DAVID MOORE

SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600

James A. Thompson  
Examiner  
Technology Division 2625

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments, see pages 10-21, filed 05 July 2007, with respect to the rejections under 35 USC §103(a) have been fully considered and are persuasive. The rejections under 35 USC §103(a) set forth in the previous office action, mailed 02 April 2007, have been withdrawn. The present amendments to the claims have overcome the prior art rejections set forth in said previous office action.

### *Allowable Subject Matter*

2. **Claims 25-43 are allowed.**

The following is an examiner's statement of reasons for allowance:

Claim 25 recites that (1) the image content is organized on a line-by-line basis, with each line parallel to a first axis; (2) a first segment tag is given to a first line segment; (3) a second segment tag is given to a second line segment, with the second line segment parallel and proximate the first line segment and also overlapping a position in the first axis; and (4) a memory optimization scheme which sets the second segment tag equal to the first segment tag and accessing the same memory location as the first segment tag. Elements (1)-(4) are used to automatically determine window regions in an image. The manner in which segment tag values are stored and accessed is fairly common in the art. For example, a similar scheme based on palette entries is shown in Braudaway (USPN 5,502,458) in which an organized memory is used to store particular RGB values (see figures 2B-2C of Braudaway) which are used so that individual pixel locations store the palette entry number rather than the RGB values.

However, claim 25 distinguishes over the prior art by tagging parallel, but proximate, line segments of the image content and determining if the segment tags are equal for line segments that are parallel to each other and overlap positions in the first axis. Since the first and second lines are parallel but proximate, the first and second line segments do not themselves overlap, but overlap positionally with respect to the first axis (but not the second). In other words, the first and second line segments have some of the same positional values in one axis (say, the width direction), but do not have the same positional values in the other axis (say, the height axis) even though the positional values in the other axis are proximate each other. If the first and second segments overlapped each other directly, then the first and second line segments would be the same line segment since the segment tags would be the same. But, if the first and second line segments overlap in the first axis (for example, the width direction of the image)

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and are parallel and proximate to each other, then the first and second line segments are given the same segment tag and are considered a part of the same windowed region.

The above described automated windowing delineates the various objects in an image based on the characteristics of each segment tagged in the image, the overlapping of the position of each segment in one axis, and the proximity of each segment in the other axis. This particular type of automated windowing of image objects has not been found in the prior art. The closest prior art is the previously cited combination of references Azumaya (USPN 5,465,307), Farber (USPN 5,978,791), and Liguori (USPN 5,912,672), which has been overcome by the present amendments to the claims. Thus, claim 25 is deemed allowable. Claims 26-29 and 42 are deemed allowable due to their dependencies from claim 25.

Claim 30 is directed to an apparatus which performs a similar type of automatic windowing comprising the elements (1)-(4) above ("neighboring" line segments, as recited in claim 30, would also be "proximate" line segments as recited in claim 25). Thus, claim 30 is deemed allowable for reasons similar to those given above for claim 25. Claims 31-35 and 43 are deemed allowable due to their dependencies from claim 30.

Claim 36 is a method similar to claim 25, but includes steps relating to the analysis of individual pixels. The analysis of the individual pixels in each row is then used to form line segments having similar pixel identifiers. The line segments thus formed are reviewed to determine windowing of the image data by associating neighboring line segments having common pixel tags but different pixel identifiers (and thus, parallel but proximate line segments). The pixel tags and pixel identifiers are determined based on both the present row and the previous row of the image data. Since claim 36 contains the same elements deemed allowable (though recited differently), claim 36 is deemed allowable. Claims 37-41 are allowable due to their dependencies from claim 36.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Thompson whose telephone number is 571-272-7441. The examiner can normally be reached on 8:30AM-5:00PM.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on 571-272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

James A. Thompson  
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JAT  
20 July 2007

  
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